

HI-STORM FW Amendment 7 Pre-Application Meeting

April 20, 2021



Agenda

- Amendment 7 Proposed Changes
- Reorganization of the CoC with the Graded Approach
- Design Overview HI-STORM FW Version UVH
- Design Overview Optional Vent/Drain Port Cover
- Summary and Schedule

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Proposed Changes



- Reorganization of CoC with the “graded approach”
- HI-STORM FW Version UVH
 - Version UVH is a HI-STORM FW overpack with the removal of ventilation ducts.
- Optional vent/drain port cover plate design.
- Remove PT examination on the post hydrostatic pressure test.
 - PT not required as part of ASME hydrostatic pressure testing requirements
 - Supports ALARA operations
- Allow site-specific analysis of fire and burial under debris scenarios.
- Use of water without glycol in the HI-TRAC water jacket during operations below 32°F.
 - A minimum MPC heat load is demonstrated to prevent the water within the HI-TRAC water jacket from freezing.

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Proposed Changes

- **HI-DRIP ancillary system.**
 - An optional ancillary system designed to prevent water within the MPC during short term operations within the HI-TRAC.
 - Incorporation of design submitted with HI-STORM 100 Amendment 15 submittal.
- **Addition of BWR fuel assembly class 10x10J**
 - Fuel assembly class 10x10J is added to allowable content for storage in the MPC-89 canister.
 - Fuel type is currently in use by operating reactors and has been previously submitted for approval with the HI-STORM 100 LAR-15.
 - New fuel type was determined to be bounded by design basis fuel already analyzed in the HI-STORM FW FSAR.

CoC Reorganization Following the Graded Approach

■ Background

- RIRP-I-16-01 (2017): NEI proposed an outline for improving the storage CoC format and contents on behalf of the industry
- TN Pilot (submitted 2017 – approved 2020): TN submitted a non-technical amendment to a CoC following the guidance in RIRP
- NEI Margin White Paper: Recommendation VI-1: CoC holders should amend their CoCs to follow the precedent
- Holtec CoC 1014 – Amendment 16 and planned CoC 1032 – Amendment 7 Requests include technical changes and a proposed reorganization of the CoC and its appendices

CoC Reorganization Following the Graded Approach

NEI Reorganized Outline:

■ CoC

I. Technology

II. Design Features

■ Appendix A – Inspections, Tests, and Evaluations

■ Appendix B – Technical Specifications

1. Definitions, Use, and Application

2. Approved Contents

3. LCOs and SRs

4. Administrative Controls

CoC Reorganization Following the Graded Approach

- This LAR contains proposed technical changes to the existing CoC and its Appendices
- It also contains the following documents to support the reorganization:
 - Reorganized CoC and Appendices
 - Reorganization Tables
 - Reorganization Matrix
- The only items that do not fit into the proposed outline
 - Code alternative tables retained
 - Expanded information included in Appendix A

HI-STORM FW Version UVH

- Unventilated overpack with high density concrete. This overpack is analyzed and supports loading of MPC-37, MPC-89, and MPC-44.
- Removes periodic inspection of vent openings and associated LCOs.
- Similar to the approved HI-STORM FW overpack, the Version UVH is of the variable height design.
- Evaluation model methodologies are consistent with current HI-STORM FW analyses.



MPC Vent/Drain Port Cover Plates

- Optional vent and drain penetrations design to include second port cover plate.
- Design meets requirements of ISG-18 Rev. 1.
- Field helium leak test not required on optional design.
- Justification:
 - ALARA
 - Confinement Integrity

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Summary



- CoC Reorganized following the “graded approach”.
- HI-STORM FW Version UVH is an unventilated version of the HI-STORM FW overpack with high density concrete.
- Evaluation methodologies follow those currently prior NRC approved models.
- Planned Submittal end of April 2021.

Questions and Discussion